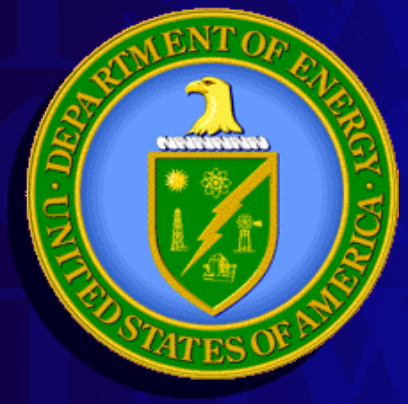
COMBATING TERRORISM TECHNOLOGY SUPPORT



TSWG Mission and Objectives

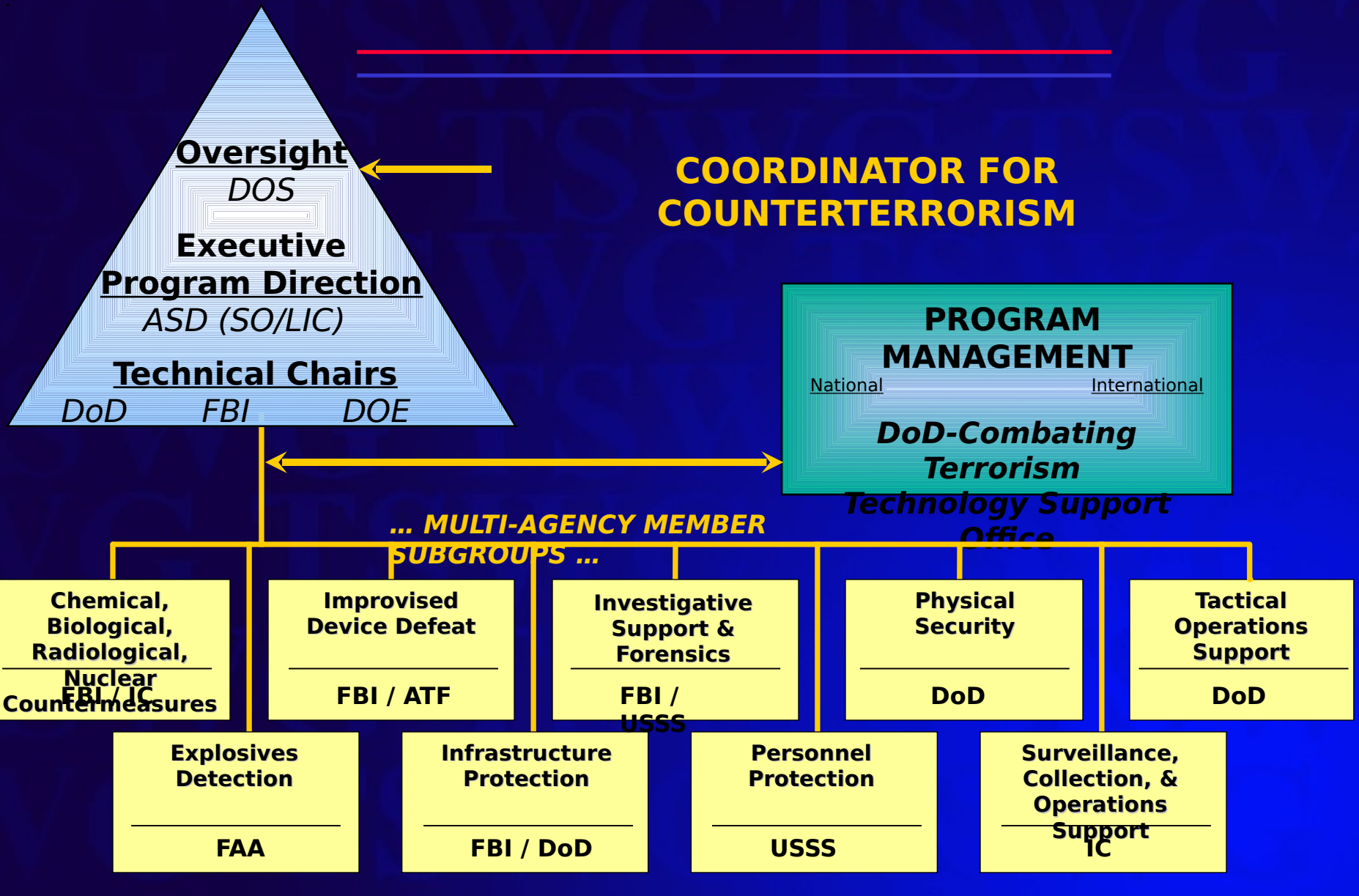
Mission:

- Conduct the U.S. national interagency research and development program for Combating Terrorism.

Objectives:

- Provide interagency forum to coordinate R&D requirements for combating terrorism
- Sponsor interagency advanced technology development
- Promote technology information transfer
- Influence basic and applied research

TSWG Structure



TSWG Membership

Department of Defense

- OASD (SO/LIC)
- OASD (C3I)
- OATSD (NCB)CP/CBD
- OUSD (A&T) DDR&E and S&TS/LW
- Defense Computer Forensics Laboratory
- Defense Intelligence Agency
- Defense Logistics Agency
- Defense Threat Reduction Agency
- National Reconnaissance Office
- National Security Agency
- The Joint Staff
- Unified Commands
- U.S. Special Operations Command
- U.S. Air Force
  - Air Combat Command
  - AFOSI
  - Force Protection Battle Laboratory
    - Force Protection System Programs Office
  - Security Forces Center
- U.S. Army
  - 52nd ORD
  - SBCCOM / ECBC
  - Corp of Engineers / WES / PMDC/WES
  - Criminal Investigations Command
  - Maneuver Support Center
  - Technical Escort Unit
  - National Guard Bureau
- U.S. Navy
  - JPO / STC
  - Naval Criminal Investigative Service
    - Naval Facilities Engineering Service Center
  - Naval Special Warfare
  - NEODTD / DTRG
- USMC Chemical Biological Incident Response Force

Department of Agriculture

- Food Safety and Inspection Service
- Office of the Inspector General
- Animal and Plant Health Inspection Service (part)

Department of Commerce

- National Institute of Standards and Technology
  - Office of Law Enforcement Standards

Department of Energy

- National Nuclear Security Administration
- Office of Security
- Office of Energy Intelligence
  - National Assessment Team

Department of Homeland Security

- Animal and Plant Health Inspection Service (part)
- Critical Infrastructure Assurance Office
- Federal Emergency Management Agency
- Federal Protective Service
- National Infrastructure Protection Center
- Office of Domestic Preparedness
- Transportation Security Administration
  - Maritime & Land Security
  - Technical Center
- U.S. Coast Guard
- U.S. Customs Service
- U.S. Secret Service
  - Forensic Services Division
  - Technical Security Division

Department of Health & Human Services/USPHS

- Food and Drug Administration
- Office of Emergency Preparedness

Department of Justice

- Bureau of Alcohol, Tobacco, Firearms & Explosives
  - Explosives Technology Branch
  - Office of Laboratory Services
    - Forensic Science Laboratory
- Drug Enforcement Administration
- Federal Bureau of Investigation
  - Counterterrorism Division
    - WMD Countermeasures Unit
  - Laboratory Division
    - Bomb Data Center
    - Forensic Science Training Unit
    - Hazardous Materials Response Unit
- Federal Bureau of Prisons
- National Institute of Justice
  - Office of Science and Technology
- U.S. Marshals Service

Department of State

- Office of the Coordinator for Counterterrorism
- Bureau of Diplomatic Security
- Foreign Buildings Operations

Department of Transportation

- Intelligence and Security Division
- Volpe Center

Independent Agencies

- Central Intelligence Agency
  - Counterterrorism Center
  - Center for CIA Security
  - Central MASINT Organization
- Environmental Protection Agency
- General Services Administration
- Nuclear Regulatory Commission
- Office of Science and Technology Policy

Physical Security

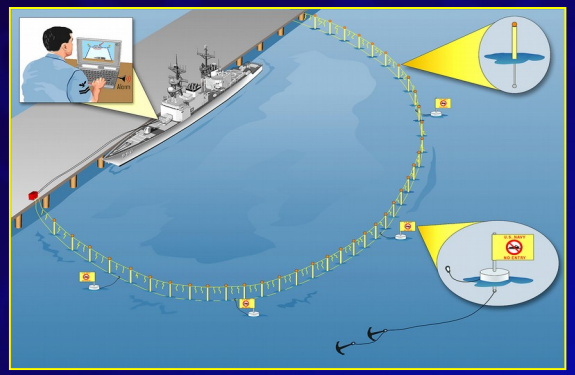
Blast Mitigation

Entry Point Screening

Intrusion Detection

Intrusion Detection, Assessment & Delay

QUPID
Quick Reaction Perimeter
Intrusion Detection Sensor



Portable Harbor Security System

Electronic Trip
Flare

Ground Surveillance
Radar
For
Perimeter Intrusion
Detection

Early Warning
and
Detection

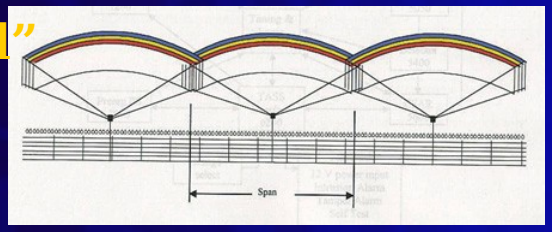
QUPID (Quick Reaction Perimeter Intrusion Detection) Sensor

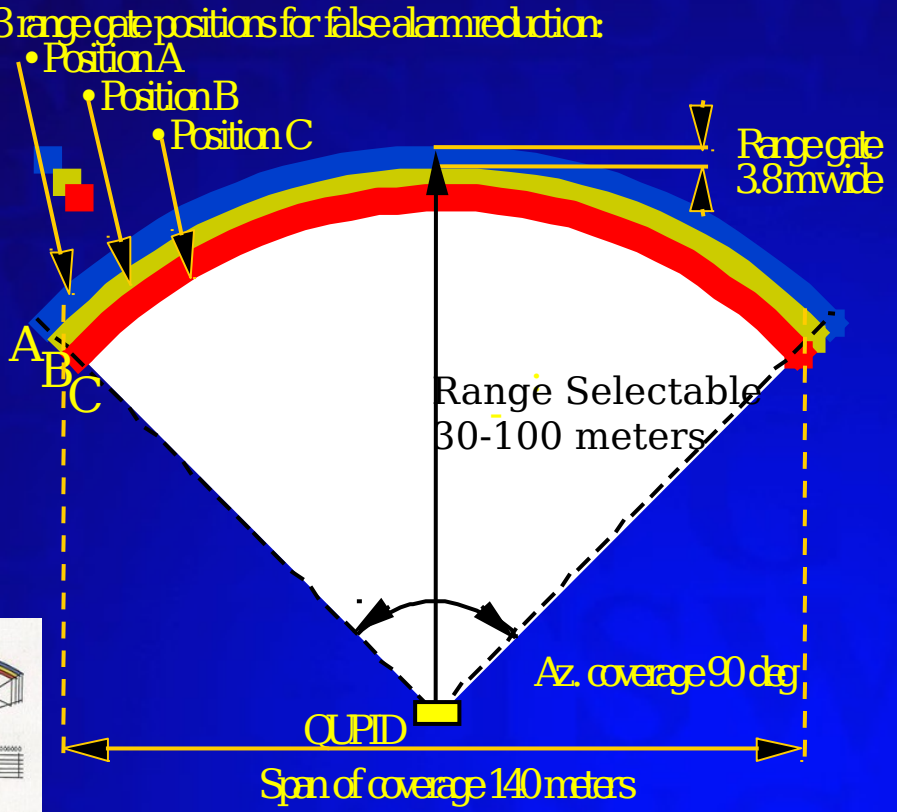
Requirement: "Over the perimeter" sensor to detect human intruders and vehicles in high clutter environments

Approach: Ultra wideband radar with false alarm reduction capability using adjustable range gates

Status: Transitioned to USAF acquisition program Jul 02. Developmental Testing – May 03.

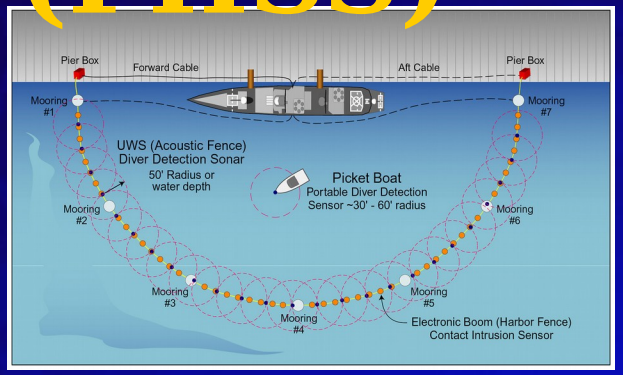
QUPID





Projects a "virtual" detection fence beyond the legal perimeter

Portable Harbor Security System (PHSS)



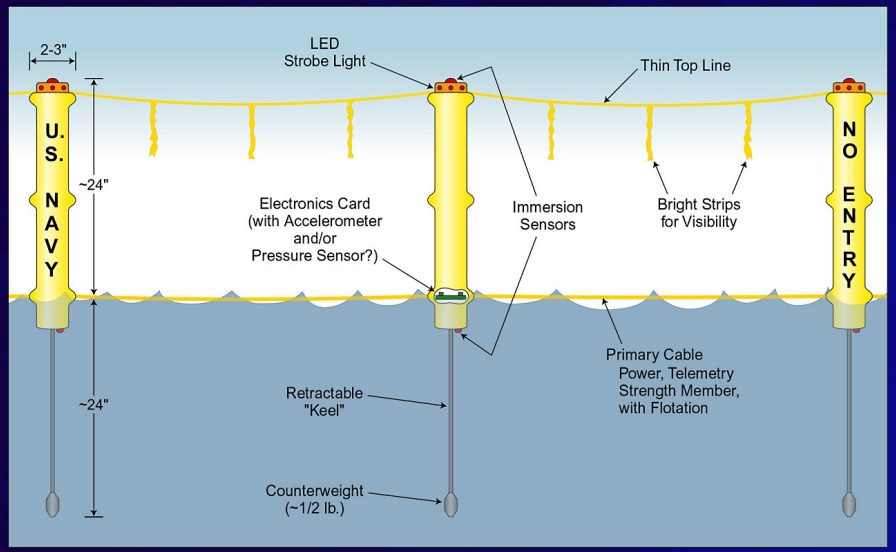
Requirement: Portable barrier system to protect surface ships and submarines from attack by detecting high speed surface craft and swimmers.

Approach: Create basic low cost boom barrier and detection system which is easy to deploy and store. Conduct proof of concept and operational testing.

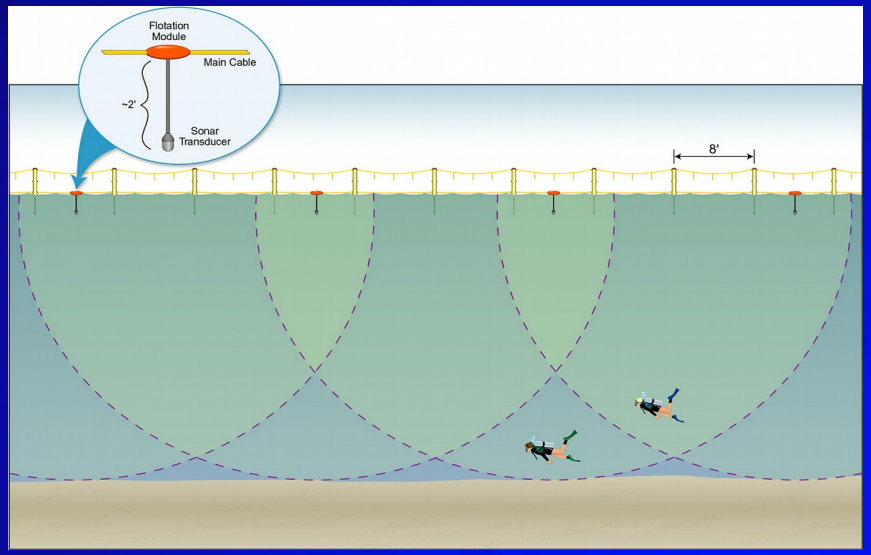
Status: Field testing Sep 03.

PHSS

BOOM



SONAR BUOY



Stabilized Panoramic Intrusion Detection and Recognition (SPIDER) System

Requirement: Long-range day/night video imaging system that automatically detects the locations of intruders at ranges up to 4 km. Provide 360 degree surveillance from a single sensor location.

Approach: Integrate COTS FLIR,CCD, Laser Ranging capabilities. Transition to vendor for commercial production.

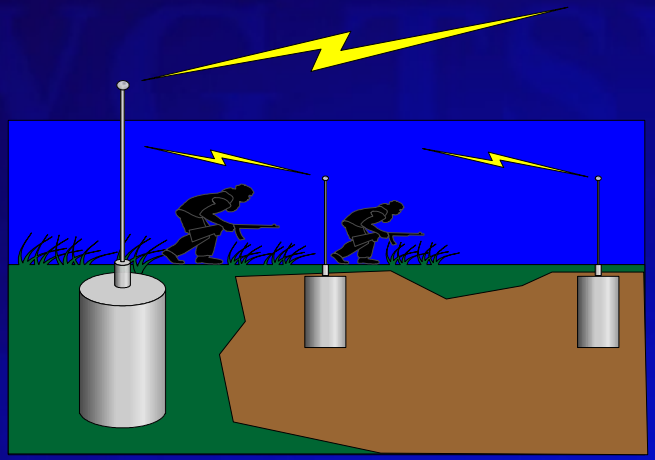
tus: Planned deployment to CENTCOM for operational eva

Ground Surveillance Radar for Perimeter Intrusion Detection

ASDE-3 RADAR

Airfield perimeter intrusion detection system using existing ASDE –3, Ground Surveillance Radar (GSR), to detect and display human-sized targets.
Field test at JFK IAP Jun 03

Electronic Trip Flare



Requirement: Electronic trip flare for early warning against intruders attempting perimeter penetration

Approach: Passive infrared motion detection sensor with communications link to remote control transceiver

Entry Point Screening

Personnel

Vessels

Mail

Vehicles & Cargo

Advanced Vehicle/ Driver Identification System (AVIDS)

Requirement: Develop transportable vehicle and personnel identification system for use by expeditionary and fixed installation security personnel.

Approach: COTS hardware integrated with Government developed software allowing facility to augment existing EPS capacity at facility.

Status: Test bed established at Ft. Campbell, KY. Reduced access personnel and vehicle verification time to < 2 seconds.

AVIDS

Centralized Server
Provides < 2 Sec
Response over 18 sq. mile WLAN
DOD CAC Compatible

Simple Operator Interface

Enforcement

UVIS Alarm System

License Plate Reader

Weigh-in-Motion

Under Vehicle Inspection Systems Assessment

Requirement: Determine if COTS systems being assessed are more effective and suitable than the mirror-on-a-stick for inspecting vehicles.

Approach: A national testing group evaluated 3 drive-over and 2 hand-held camera systems and mirror-on-a-stick.

Result: Mirror-on-a-stick proved to be an equivalent solution. Copies of test report available through TSWG SIPRNET site or by requests submitted to pssubgroup@tswg.gov.

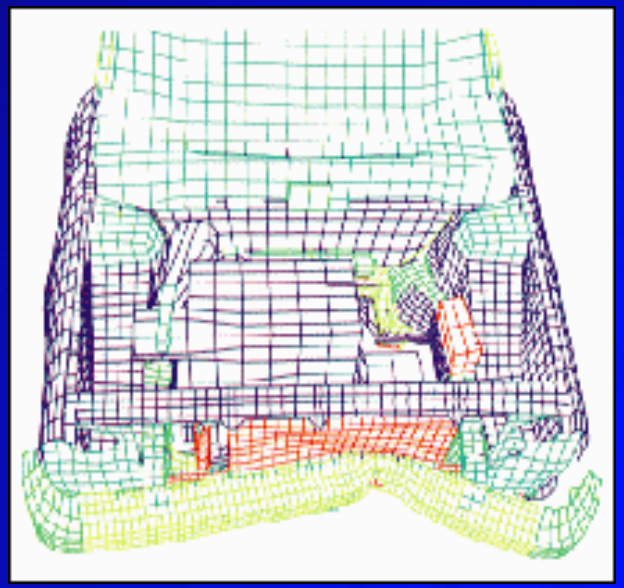
3D Barrier Impact Response Model (BIRM 3D)

Requirement: Develop modeling and simulation software of security barriers and crash data for evaluation of vehicular barrier designs without conducting full-scale crash tests.

Approach: Software tool for 3D simulation of vehicular impact responses of perimeter security barriers.

Status: Completion planned November 03

BIRM3D



Commercial Mobile Vehicle and Cargo Inspection System (MVACIS) Fielding

Requirement: Provide COTS Vehicle & Cargo Screening Systems to DoD Commands and assess effectiveness

Approach: Selected USA/PM-PSE as Executive Agent to procure and provide fielding assistance to Commands. TSWG to conduct assessment after all units have been fielded.

Status: Six platforms procured. Five bound to USA and one to USN Commands.

Military Mobile Vehicle & Cargo Inspection System (MMVACIS)

Requirement: Vehicle and cargo imaging inspection system field deployable via C-130.

Approach: Build on COTS technology using HMMVW platform with out-vehicle containing Cs 137 source.

Status: Completed USAREUR OT&E 28 September 02. Planned deployment to CENTCOM

Vessel Identification and Positioning System (VIPS)

Requirement: Develop Identification of Friend or Foe (IFF) system using secure differential GPS combined with land based and ship borne radar to track ships in harbors and ports.

Approach: Incorporates secure data communications, tamper detection capability, and real-time tracking display to provide tactical situation aw

Status: 1st Generation deployed to Norfolk Naval Base Summer 02. Enhanced 1st Generation undergoing OT&E in Boston Harbor with integrated ship-born radar data.

VIPS Hardware

Host Nation Transponder

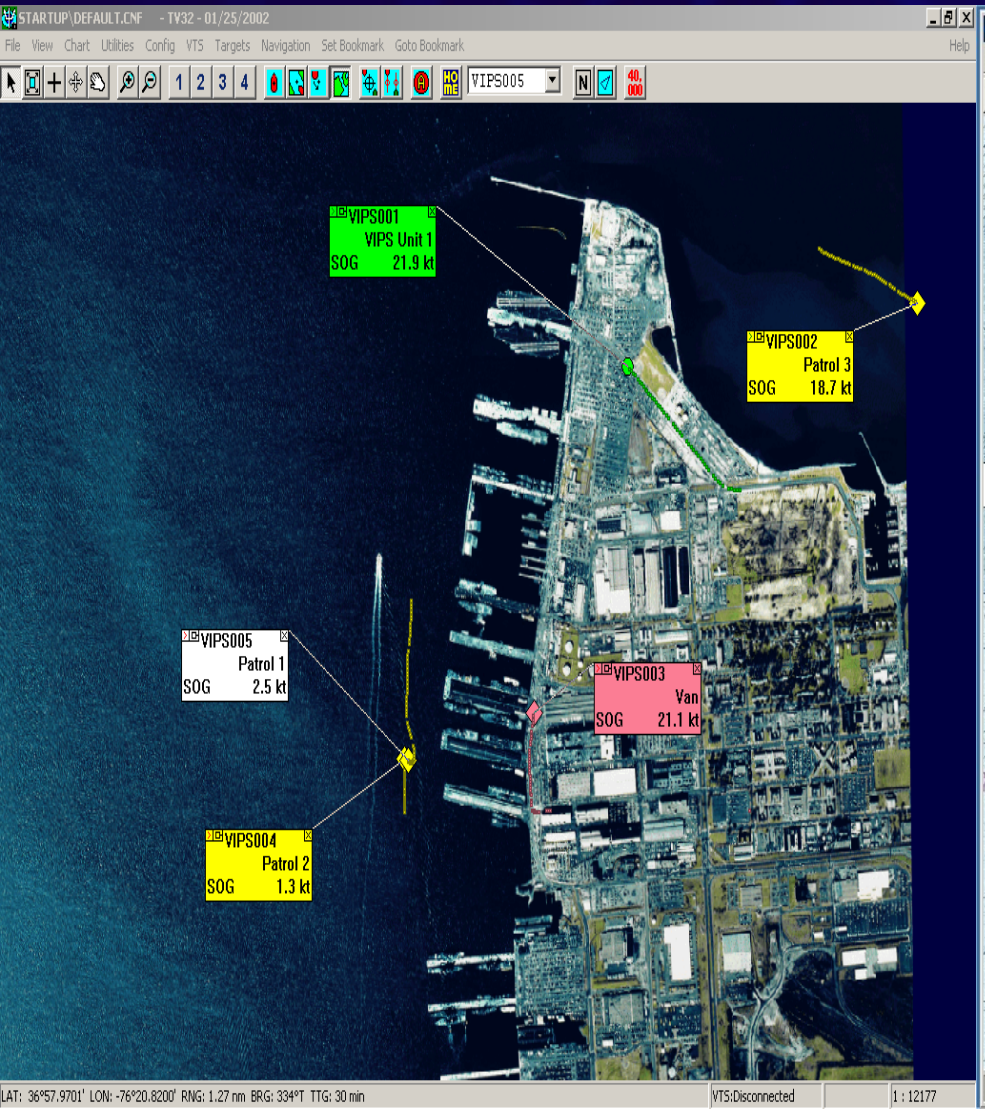
Harbor Patrol Transponder

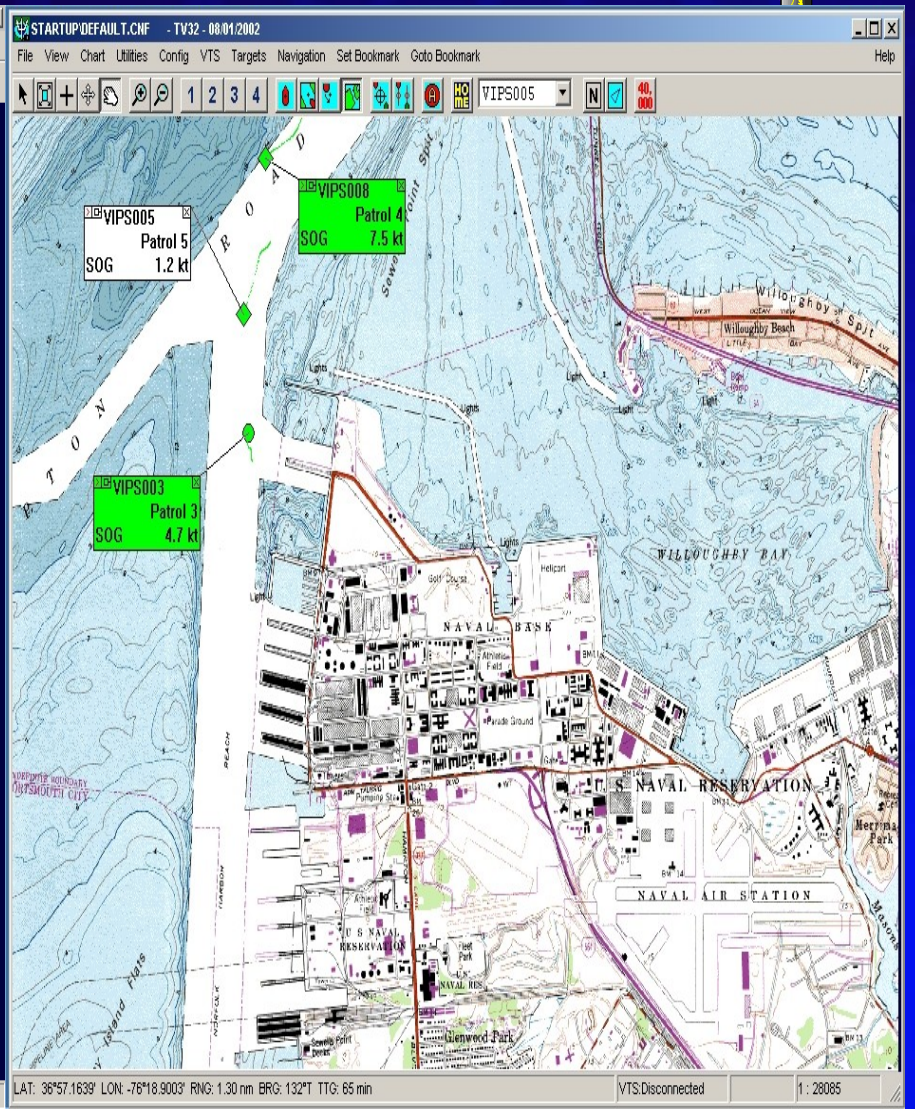
Patrol Boat Installation

Base Station

Patrol Leader Display

VIPS Display





Small Watercraft Inspection Guide (SWIG)

Requirement: Pocket-sized reference guide for DOD Waterside Force Protection personnel assigned to picket duty.

Approach: Use DOD and USCG drug interdiction experience and adapt for explosive detection using Vehicle Inspection Checklist (VIC) format.

Status: Available through GPO.

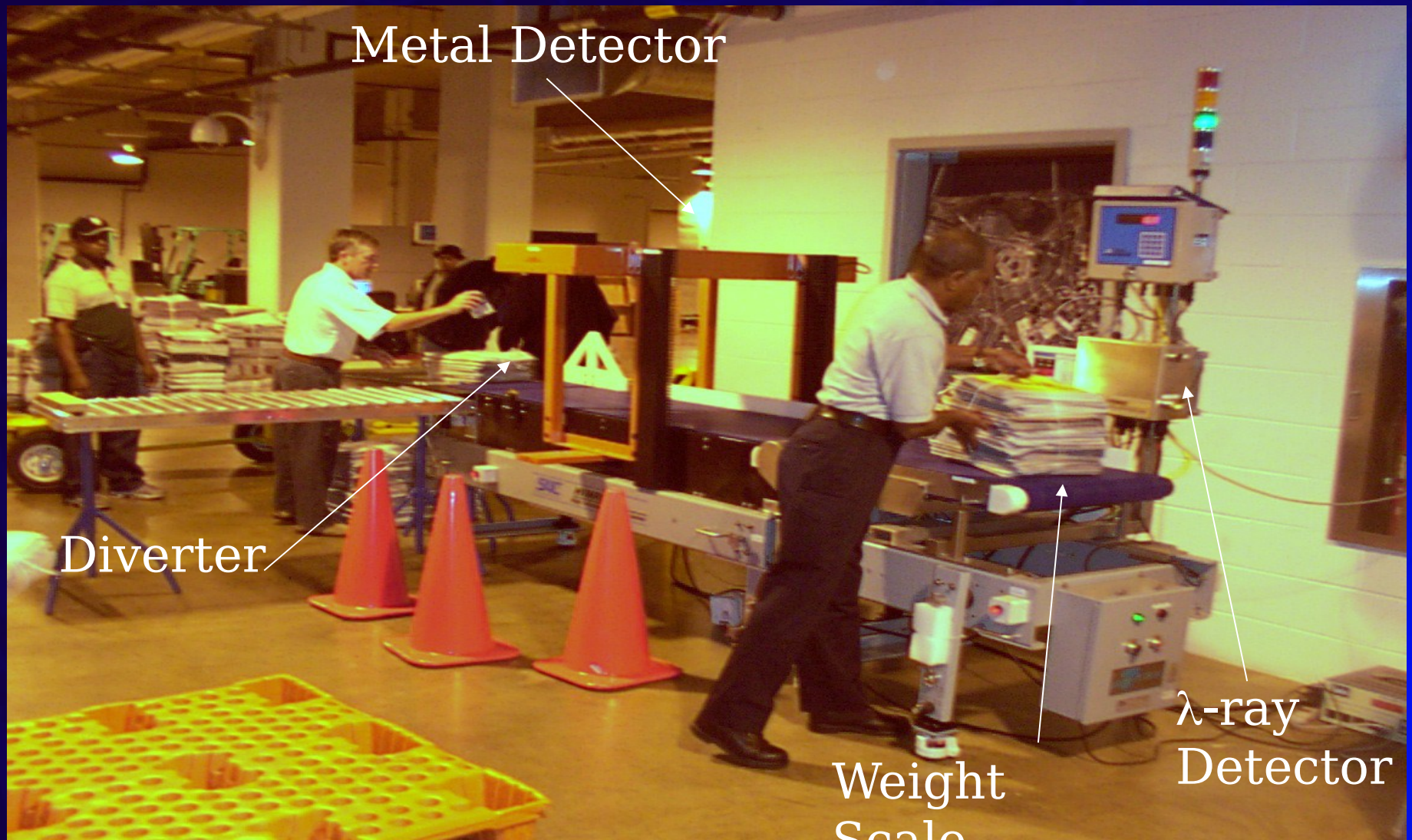
High Volume Mail Room Scanner

Requirement: Low-cost system to rapidly screen parcels and flat mail for explosive devices using non-invasive screening technologies.

Approach: Combine in-line weighing and metal detection to profile mail pieces. Gamma ray detectors incorporated in FY 02 to detect radiological/nuclear threats.

Status: First prototype used at SLC Olympics 2002 then moved to a DoD facility for additional OT&E. Second prototype unit will undergo OT&E in FY 03 by DoD and USPS at location to be determined.

High Volume Mail Room Scanner

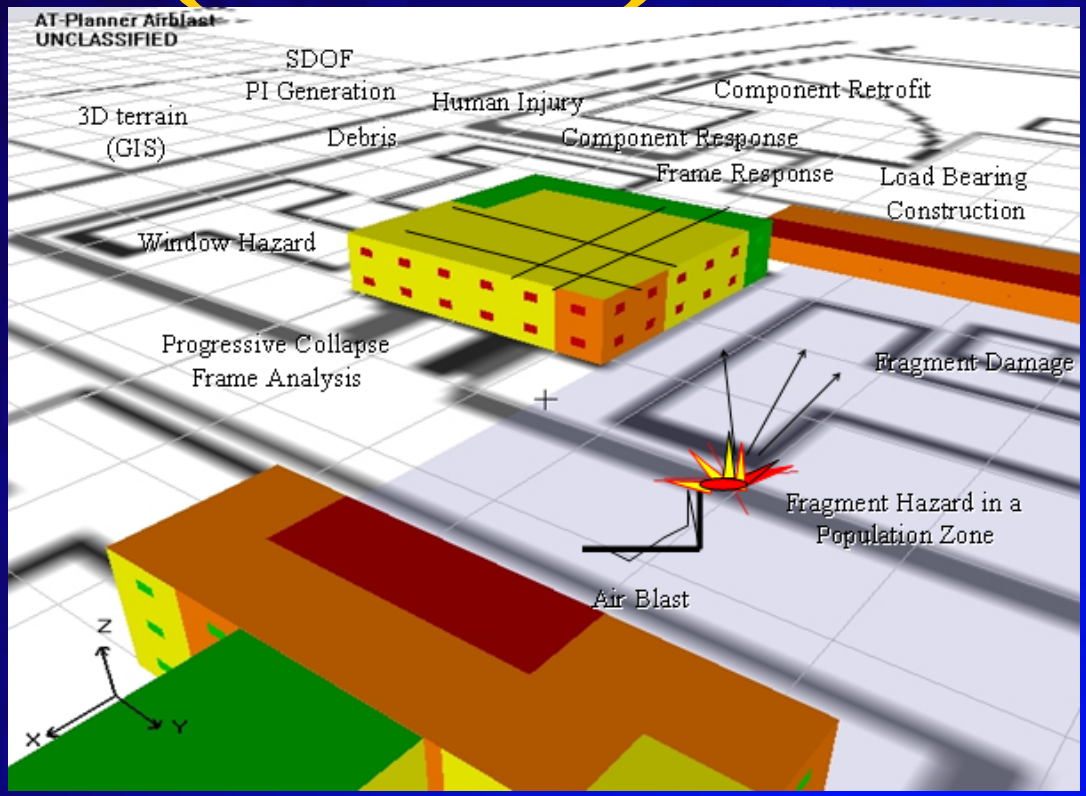


Blast Mitigation

Enhance the survivability of US Forces, civilian personnel, and infrastructure by providing new methodologies for protection from blast threats.

Blast Effects Estimation Model (BEEM)

Requirement: Develop a software tool to help security planners/engineers implement techniques to protect people in buildings from terrorist bomb blasts.



Status: Available at: https://beem.army.smil.mil